

- (b) **Cover and Markings.** Mark pull box covers with the appropriate legend of “Highway Lighting” or “Street Lighting” when they’re used for lighting conductors only, or “Traffic Signal” when they’re used for traffic signal conductors with or without lighting conductors. Make the letters between 1 inch and 3 inches (25 and 75 mm) tall. Cast the legend with the cover so that it’s clearly defined, of uniform depth or height, and placed parallel to one side of the cover. When the conductor voltage is greater than 600 volts, add the words “High Voltage.”

Equip the cover, which shall have a non skid surface, with a recessed molded lifting eye and recess hold-down bolts.

- (c) **Ground Rod.** If specified, install a copperweld ground in accordance with the details and at the locations shown on the Plans.

### 803.05. METHOD OF MEASUREMENT.

The *pull boxes* of the size and type specified will be measured by each unit installed. Each pull box unit shall include cover, extension, ground rod, concrete apron, crushed rock, excavation, and backfilling, necessary to construct and install pull boxes as shown on the Plans.

### 803.06. BASIS OF PAYMENT.

Accepted pull boxes, measured as provided above, will be paid for at the contract unit price as follows:

PULL BOX.....EACH

Such payment shall be full compensation for furnishing all materials, equipment, labor, and incidentals required to complete the work as specified.

## SECTION 804 CONCRETE FOOTINGS

### 804.01. DESCRIPTION.

This work shall consist of furnishing materials and installing concrete footings for traffic control devices in accordance with these Specifications and in reasonably close conformity with the locations and dimensions shown on the Plans or established by the Engineer.

### 804.02. MATERIALS.

Materials used shall meet the requirements specified in the following Sections of Section 700-Materials and AASHTO Specifications:

Portland Cement Concrete, Class A	701
Reinforcing Steel	723
Electrical Conduit	709
Anchor Bolts and Nuts	AASHTO M 183
Galvanizing (Bolts, Nuts & Washers)	AASHTO M 232

**804.04. CONSTRUCTION METHODS.**

- (a) **Footings.** Construct concrete footings in accordance with Section 509 so that they rest on firm ground with the top of the footing level, to minimize the amount of shimming required later. Construct them in place as required on the Plans and to the grade established by the Engineer. When an obstruction prevents the construction of a footing at the planned location, construct it at a location established by the Engineer.

*NOTE: The footing shown on the Plans may be modified if conditions require. Such modification, if ordered by the Engineer, will be paid for according to Subsection 109.03 or by the adjusted quantities of materials required—i.e., concrete and reinforcing steel.*

- (b) **Anchor Bolts.** Use anchor bolts of the size and quantity shown on the Plans. Locate them accurately and securely in the footing by means of a template. Anchor bolts shall have the top exposed portion plus 6 inches (150 mm) both galvanized and threaded, as shown on the Plans. Supply each anchor bolt with galvanized hex head nuts plus flat washers and lock washers as shown on the Plans.

*NOTE: Do not weld on any portion of the body of the anchor bolt.*

- (c) **Conduits.** When conduit must be installed as part of the footing, it shall be of the quantity, size and type as shown on the Plans. Locate conduit couplings at least 6 inches (150 mm) from the face of the footing. The conduit required in the footing will be paid for in the cost of other materials in the footing.
- (d) **Ground Rod** If copperweld ground rod is required, it shall be of size shown in the Plans.
- (e) **Poles, Posts, or Breakaway Bases.** Do not erect poles, posts, or breakaway bases until the foundation has set at least 72 hours unless they are required to be set directly into the footing.

After the footing has been completed, restore the surrounding area to an acceptable appearance.

**804.05. METHOD OF MEASUREMENT.**

*Concrete footings* of various sizes and shapes will be measured by the cubic yard (cubic meters) of concrete and pounds (kilograms) of *reinforcing steel* required. The footing unit shall also include anchor bolts, nuts, washers, ground rod, conduit, all labor, tools, equipment, excavation, backfilling, and incidental work necessary to construct the footing as shown on the Plans.

**804.06. BASIS OF PAYMENT.**

Accepted concrete footings, measured as provided above, will be paid for at the contract unit price as follows:

- (A) STRUCTURAL CONCRETE ..... CUBIC YARD (CUBIC METER)  
 (B) REINFORCING STEEL ..... POUND (KILOGRAM)

Such payment shall be full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.